ENERGY POLICY UPDATE

FEBRUARY 24, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email Gloria Castro.

UPCOMING WEBINARS

DOE Tribal Energy Program Webinar: Strategic Energy Planning
Wednesday, February 26
11:00 AM - 12:30 PM MST
Click here to register.

DOE – EERE Webinar: Successful Commissioning of Refrigeration Systems, and More
Thursday, February 27
11:00 AM - 12:30 PM MST
Click here to register.

State & Local Energy Efficiency Action Network Webinar: Setting Energy Savings for Utilities
Thursday, Mary 27, 2014
11:00 AM – 12:00 PM MST
Click here to register.

NEW! Governor Jan Brewer Establishes emPOWER Arizona: A Plan for an Affordable, Reliable Energy Future
"The Plan - titled emPOWER Arizona: Executive Energy Assessment and Pathways - was a collaborative effort by the Governor's Office of Energy Policy, Arizona Commerce Authority, Arizona Legislature, Arizona Corporation Commission and leading industry partners."

Empower Arizona: Executive Energy Assessment and Pathways - Executive Summary
Empower Arizona: Executive Energy Assessment and Pathways - Full Report *(Click On Table of Contents to view area of interest, orange bar on top of page returns to TOC)*
Executive Order 2014-04 - Adopting Arizona's Master Energy Plan and Establishing State Energy Advisory Board

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The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

ACC To Allow Waivers from Rooftop Solar Mandate
[Arizona Daily Star, Feb. 7] State regulators have agreed to Allow Tucson Electric Power Co., Arizona Public Service Co. And a rural TEP affiliate to apply for waivers to state rules requiring a certain amount of rooftop-solar installations to meet clean-energy goals. But the Arizona Corporation Commission at its open meeting on Thursday put off the contentious issue of how the power companies count customers' rooftop-solar-electric systems toward their state requirements. In a move that troubled some consumer and solar advocates, the five-member panel instead voted to open up the existing renewable-energy rules — originally passed in 2006 — to develop a new methodology to count new, customer-sited solar installations. At issue is how utilities count photovoltaic systems customers install on their homes or businesses toward Arizona's renewable-energy standard.

Arizona Solar Industry Cut 1,200 Jobs in 2013
[Arizona Central, Feb. 13] Arizona lost about 1,200 jobs in the solar industry in the last year, but remains no. 2 in the nation for the number of people working in the field, according to an industry trade group. The Washington, D.C. based solar foundation reports that nationwide the industry added about 24,000 jobs in 2013, but Arizona is one

of five states that went the other direction and lost jobs. Pennsylvania, Oregon, Michigan and Alaska also lost solar jobs, though not as many as Arizona, in 2013. California has the most solar jobs, with more than 47,000. “Arizona is really an anomaly this year,” said Andrea lucked, president and executive director of the solar foundation. “Arizona lost the most, but it had the most to lose, really.” Things look more positive for 2014, with employers responding to the survey anticipating a 5.6 percent increase in Arizona solar hiring this year, which would be about 480 jobs. The analysis found 8,558 workers in the industry in Arizona in 2013. Nationally, the industry is expected to increase employment by nearly 16 percent this year, adding more than 22,000 jobs. Most of the Arizona drop last year from 9,800 workers in 2012 was likely caused by major solar power plants being completed and the temporary construction jobs going away. But other factors, such as the ongoing debates over solar subsidies in Arizona, also might have played a role, officials said.

Burn Coal, Feed the Planet?

[Arizona Daily Sun, Feb. 21] State Senator Chester Crandell, R-Heber, says he doesn’t want the Environmental Protection Agency regulating carbon dioxide from Arizona’s coal-fired power plants because it could lead to global starvation. Crandell, who represents Flagstaff, made the comments during a hearing of SCR1022, at the government and environment committee meeting last week. The resolution’s stated purpose is to oppose implementing rules for coal plants that the state doesn’t consider to be technologically feasible or “recognize the state’s primary role in establishing and implementing plans to achieve emissions reductions.” Several environmental advocates spoke in opposition to the measure, including Bret Fanshaw of Environment Arizona. Fanshaw told the senator that he opposed the resolution because coal power plants are a leading source of carbon dioxide, which is fueling to global climate change. The environmentalist added that there was a scientific consensus with 98 percent of experts agreeing that climate change was real. A similar number has been found by several studies, including a 2013 survey of 10,306 scientists done by the group skeptical science. But Crandell grilled Fanshaw and said that he disagreed that there was a scientific consensus on climate change. “If the two science groups can’t come together and come to a consensus, then the science must be wrong,” Crandell said. Instead, he offered that all the cement in Phoenix could be causing temperatures to rise in the area and not climate change from greenhouse gasses. He added that, furthermore, he had recently read an article that said excess carbon dioxide emissions were producing a “bumper crop” of soy and corn, which would be necessary to “feed the nations.”

Electric Car Charger Stations To Come to Arizona

[KJZZ.org website, Feb. 19] Electric cars are often limited to city driving to be near a charging station. Here in Arizona, car owners will soon be able to travel further. Mesa based GOe3 is installing 24 electronic car charger stations across interstates in Arizona. The company already has one at Picacho Peak and one in Tucson near the university campus. In the next four months, two more will be installed between Phoenix and Tucson and three will go on I-17 between Phoenix and Flagstaff. GOe3 Founder Bruce Brimacombe said drivers of gas and electric cars alike are not limited by their vehicles gasoline or battery range by but by bladder range.

SRP Reports Increase in Rooftop Solar, But Business Installations Dip

[Phoenix Business Journal, Feb. 18] Salt River Project's residential solar installations increased last month even as the Phoenix area’s other major utility, Arizona Public Service Co., reported a dip. But SRP’s business installations were down last month. APS has started adding a fee to consumers' solar installations. SRP does not charge a fee. *The Arizona Republic* reports SRP installed 264 residential solar systems last month, up from 211 in January 2013. SRP had only 10 business installations compared with 15 a year ago, the *Republic* reports.

SunEdison Interconnects 16.4 MW Solar Power Plant for Davis-Monthan Air Force Base

Largest Solar Plant in Department of Defense Expected to Save Base $500,000 Dollars Annually

PR Newswire, Feb. 20] Belmont, CA SunEdison (SUNE), a leading solar technology manufacturer and provider of solar energy services, and MIC Solar Energy Holdings, a subsidiary of Macquarie Infrastructure Company LLC (MIC), today announced the completion of a 16.4 megawatt (MW) photovoltaic (PV) solar power plant located outside Tucson, Arizona on Davis-Monthan Air Force Base (AFB). The plant is the largest solar energy facility at any U.S. Department of Defense installation and is expected to reduce the Air Force's utility costs by $500,000 annually for the next 25 years.

TEP Honors Eight for Boosting Energy Efficiency

[Arizona Daily Star, Feb. 12] Tucson Electric Power Co. recognized seven organizations and local sustainable- homebuilding pioneer John Wesley Miller on Wednesday for their support of energy-efficiency goals. The inaugural BrightEE Awards are part of TEP's effort to encourage customers to take advantage of new energy-efficiency programs mandated by the state. Arizona's energy-efficiency standard requires electric utilities to increase kilowatt-hour energy savings each year through customer-funded programs until the cumulative usage reduction reaches 22 percent by 2020. Several BrightEE Award recipients are customers who have cut their energy use and lowered their bills by participating in TEP's customer-funded energy-efficiency programs, which offer incentives to invest in high-efficiency technologies such as compact fluorescent lighting, pumps, motors and heating and cooling equipment.

ALTERNATIVE ENERGY AND EFFICIENCY

287 MW of U.S. Utility-Scale Solar PV Comes Online in January 2014

[Solarserver.Com, Feb. 24] The United States commissioned 13 new utility-scale solar photovoltaic (PV) plants totaling 287 MW during January 2014, according to the latest figures from the nation's Federal Energy Regulatory Commission (FERC). New PV plants included Exelon's (Chicago) 130 MW Antelope Valley Solar Phase 2Plant, which was built by First Solar Inc. (Tempe, Arizona, U.S.). MidAmerican Energy's (Ohama, Nebraska, U.S.) 61 MW Topaz Solar Farm Phase 3 expansion also came online. These plants are located in Southern and Central California, respectively. A number of mid-sized to large utility-scale PV plants also came online in North Carolina, including Duke Energy's (Charlotte, North Carolina, U.S.) 20 MW Dogwood Solar Power project, and four other projects 5 MW or larger. January 2014 PV additions are a 12% increase on the 256 MW commissioned in January 2013. PV represented 88% of the new capacity added during the month, more than 99% of which was renewable energy. At the end of January 2014, utility-scale solar represents 0.7% of U.S. capacity, and a much smaller portion of generation, estimated at around 0.2%. U.S. Department of Energy figures which also include "behind-the-meter" PV showed that solar met 0.43% of demand in the nation in 2013.

Energy Department Announces $3 Million to Lower Cost of Geothermal Energy and Boost U.S. Supply of Critical Materials

[Energy.gov, Feb. 14] The Energy Department today announced $3 million for research and development to help grow U.S. low-to-moderate-temperature geothermal resources and support a domestic supply of critical materials, such as lithium carbonate and rare earth elements. By partnering with the geothermal and mineral industries, the Department is working to expand the geographic diversity of clean, renewable geothermal energy beyond the traditional western region of the United States. Rare earths and other critical materials are essential for a range of technologies, including electric vehicles and wind turbines, as well as personal electronics such as cell phones and laptops. The use of lithium batteries, for instance, has soared over the last decade, and industry expects annual global demand for lithium carbonate used to manufacture these batteries to exceed 250,000 tons by 2017—a 60% increase from today. As demand grows in this market, securing reliable domestic supplies of critical materials for advanced manufacturing remains a growing challenge. The Department aims to advance cost-competitive geothermal energy while helping to meet this increasing demand.

Energy Department Offers $25 Million for U.S. Solar Manufacturing

[U.S. Dept. Of Energy – EERE website, Feb. 19] The Energy Department announced on February 12 that it is offering $25 million in new funding to boost domestic solar manufacturing and speed up the commercialization of efficient, affordable photovoltaic (PV) and concentrating solar power technologies. This funding, provided by the Energy Department's SunShot Initiative in support of the Clean Energy Manufacturing Initiative, will help to further lower the cost of solar electricity, support a growing U.S. solar workforce, and increase U.S. competitiveness in the global clean energy market. The new SunShot funding will support innovative projects that help solar manufacturers tackle key cost contributors across the hardware supply chain and make improvements in a broad range of manufacturing processes that save time and money. Eligible projects may include developing advanced technology that lowers domestic solar manufacturing costs and developing and demonstrating components or new manufacturing processes that cut project construction and installation time.

ENERGY/GENERAL

Obama Administration To Offer 40 Million Acres in the Gulf of Mexico for Oil and Gas Development

[Green Car Congress, Feb. 14] US Secretary of the Interior Sally Jewell and Bureau of Ocean Energy Management (BOEM) Director Tommy P. Beaudreau announced that Interior will offer more than 40 million acres for oil and gas exploration and development in the Gulf of Mexico in March lease sales. Lease Sale 231 in the Central Planning Area and Lease Sale 225 in the Eastern Planning Area will be held consecutively in New Orleans, Louisiana, on 19 March 2014. The sales will be the fourth and fifth offshore auctions under the Administration's Outer Continental Shelf Oil and Gas Leasing Program for 2012-2017 (Five Year Program), which makes all areas with the highest-known resource potential available for oil and gas leasing in order to further reduce America's dependence on foreign oil. The lease sales build on the first three sales in the Five Year Program that offered more than 79 million acres for development and garnered $1.4 billion in high bids. Sale 231 encompasses about 7,507 unleased blocks, covering 39.6 million acres, located from three to 230 nautical miles offshore Louisiana, Mississippi, and Alabama, in water depths ranging from 9 to more than 11,115 feet (3 to 3,400 meters). BOEM estimates the proposed sale could result in the production of approximately 1 billion barrels of oil and 4 trillion cubic feet of natural gas.

Sec. Moniz to Georgia, Energy Department Scheduled to Close on Loan Guarantees to Construct New Nuclear Power Plant Reactors

[Energy.gov website, Feb. 19] Washington D.C. — Building on President Obama's State of the Union address to Congress and the American public last month, U.S. Secretary of Energy Ernest Moniz today announced at the National Press Club that he will be traveling to Waynesboro, Georgia tomorrow, February 20, to mark the issuance of approximately $6.5 billion in loan guarantees for the construction of two new nuclear reactors at the Alvin W. Vogtle Electric Generating Plant. The project represents the first new nuclear facilities in the U.S. to begin construction and receive NRC license in nearly three decades. In addition, the deployment of two new 1,100 megawatt Westinghouse AP1000® nuclear reactors is a first-mover for a new generation of advanced nuclear reactors. "The construction of new nuclear power facilities like this one - which will provide carbon-free electricity to well over a million American energy consumers - is not only a major milestone in the Administration's commitment to jumpstart the U.S. nuclear power industry, it is also an important part of our all-of-the-above approach to American energy as we move toward a low-carbon energy future," said Secretary Moniz. "The innovative technology used in this project represents a new generation of nuclear power with advanced safety features and demonstrates renewed leadership from the U.S. nuclear energy industry." The two new 1,100 megawatt Westinghouse AP1000 nuclear reactors at the Alvin W. Vogtle Electric Generating Plant will supplement the two existing reactor units at the facility. According to industry projections, the project will create approximately 3,500 onsite construction jobs and approximately 800 permanent jobs

once the units begin operation. When the new nuclear reactors come on line, they will provide enough reliable electricity to power nearly 1.5 million American homes. Project partners include Georgia Power Company (GPC), Oglethorpe Power Corporation (OPC), the Municipal Electric Authority of Georgia (MEAG), and the City of Dalton, Georgia (Dalton).

USDA Announces New Grants To Help Communities Meet Water Challenges in Coming Years

$6 Million in Fiscal Year 2014, Up to $30 Million Over Next Five Years Available

[USDA website, Feb. 24] WASHINGTON – Agriculture Secretary Tom Vilsack announced today that USDA's National Institute of Food and Agriculture (NIFA) will make $6 million in grants available this year, and up to $30 million total over the next five years as part of a new initiative to provide solutions to agricultural water challenges. The grants will be used to develop management practices, technologies and tools for farmers, ranchers, forest owners and citizens to improve water resource quantity and quality. "Cutting edge research holds the key to tackling the complex challenges posed by prolonged drought and ensuring the future food security of our nation," said Secretary Vilsack. "These grants will help arm America's farmers and ranchers with the tools and strategies they need to adapt and succeed, and build on ongoing, cross-governmental efforts to provide relief to those impacted by severe drought." Today's announcement builds on USDA efforts to help farmers, ranchers and forest landowners mitigate the impacts of drought, including implementation of the livestock disaster assistance programs provided through the 2014 Farm Bill and $40 million in additional conservation dollars. NIFA has identified three critical topics that will be funded through this new challenge area: 1) ensuring the water security of surface and ground water needed to produce agricultural goods and services; 2) improving nutrient management in agricultural landscapes focused on nitrogen and phosphorous; and 3) reducing impacts of chemicals and the presence and movement of environmental pathogens in the nation's water supply. NIFA's approach will link social, economic, and behavioral sciences with traditional biophysical sciences and engineering to address regional scale issues with shared hydrological processes, and meteorological and basin characteristics.

INDUSTRIES AND TECHNOLOGIES

GE To Spend Another $10 Billion on Energy Research by 2020

[Reuters, Feb. 24] General Electric Co plans to intensify research focusing on complex energy projects such as waterless fracking and gas turbine efficiency by earmarking an additional $10 billion through 2020 for its "ecoimagination" budget. The new spending is set to be announced by Chief Executive Jeff Immelt on Monday. The research budget shows how reliant GE has become on the energy industry, its fastest growth area, as it works to become a dominant supplier of equipment and services to oil, natural gas and alternative power companies at a time when the United States undergoes an unprecedented energy boom. While GE doesn't forecast what it plans to spend on its main capital budget in future years, the new commitment gives investors a clue as to what the company's priorities will be into the next decade. The "ecoimagination" project, which was formed in 2005 to broadly focus on sustainability and other environmental issues and has cost nearly $15 billion, had been set to expire next year. Executives are extending it to 2020 with the additional $10 billion. While the overall goals of the project will remain, a larger percentage of the funds will go to energy-related projects, an acknowledgment of where Immelt and other executives see the future of the company Thomas Edison founded in 1892. "We have a very broad, long-standing commitment to energy," said Mark Little, GE's chief technology officer and head of global research.

Steel Industry Feeling Stress as Automakers Turn to Aluminum

[New York Times, Feb. 24] Dearborn, MI – For nearly a century, Ford's River Rouge factory and its neighboring steel mill have worked in close harmony to produce some of America's most popular vehicles, from the Model A to the F-150 pickup truck. But ever since Ford announced last month that it would make the body of its new F-150 mostly

out of aluminum, that steel maker, which was spun off by Ford in 1989, has faced the unsettling prospect that its longtime partner is drifting away. Carmakers' shift to aluminum has raised apprehension among steel makers, which have been fighting an increasingly uphill battle simply to maintain their business. Now, they are trying to respond, making lighter, stronger steel in a bid to retain one of their most important customers, the automakers. "The traditional view has been steel or nothing else," said Saikat Dey, chief executive of Severstal North America, the United States subsidiary of Russia's Severstal Group, which now owns the Rouge steel operations. "I think we all need to accept the reality that we live in a mixed-material world." Steel makers, which have been riding a wave of prosperity as the economy has recovered, have a lot to lose. Automakers account for about 20 percent of annual sales overall for American steel makers, the second most important source of revenue after the construction business, according to the Steel Marketing Development Institute. For those companies with historic ties to the auto industry, the loss would be more acute. At Severstal's Dearborn factory, for example, carmakers including Ford and others account for 70 percent of sales, the company said, though it declined to give specific figures for Ford. The shift to aluminum is gaining momentum. Automakers are under increasing pressure to meet strict new fuel-economy standards by 2025, and their use of lighter aluminum is expected to double between 2008 and 2025, according to Ducker Worldwide, a research firm in Troy, Mich.

Woes of Megacity Driving Signal Dawn of 'Peak Car' Era

[Bloomberg, Feb. 24] The world that Henry Ford put on wheels is poised for a stall. In the globe's growing megacities, pollution and gridlock are putting a damper on driving. In India, some commuters are leaving their cars at home to avoid traffic snarls and long prowls for parking. More young Americans are forgoing the dream of auto ownership for public transport, bikes and vehicle-sharing. Cars on the road are lasting longer than ever. All of that may herald a new era for an auto industry weaned on a century of global growth. The world will reach "Peak Car" -- a point at which annual global sales growth will top out -- in the next decade, several auto-industry analysts predict. Researcher IHS Automotive, for one, sees annual sales cresting at 100 million within that time. Peak Car is at odds with the ambitious expansion plans of global automakers, which IHS says are gearing up to produce more than 120 million vehicles by 2016 -- almost 50 percent more than last year's worldwide sales mark of 82 million. The dynamic also threatens the business plans of parts producers, suppliers of raw material and oil companies. Driving this upheaval is a rapidly emerging reality: The vehicle that ushered in an unparalleled era of personal mobility in the last century is, in many cases, no longer the most convenient conveyance, particularly as more of the world's population migrates to big cities.

LEGISLATION AND REGULATION

ARPA-E's Strategy for Survival

[MIT Tech Review, Feb. 24] The U.S. Advanced Research Projects Agency for Energy, which began its fifth annual summit today in Washington, D.C., is meant to kick-start early-stage technologies that could transform the energy industry, replacing fossil fuels and reducing dependence on foreign energy sources. But five years after ARPA-E was first funded, is it living up to the objectives (see "What ARPA-E Can't Do" and "What ARPA-E Does Well: Making Connections")? Some experts say that political pressures are making it difficult for the agency to support the risky technologies it was created to fund. ARPA-E has had bipartisan support, but it has always struggled to get funding. Last year, the House voted to give the agency just 20 percent of what it had asked for in its budget request. As it turned out, the agency got much more than that: the omnibus spending bill that passed earlier this year set aside $275 million for the agency, about 75 percent of the budget request. Part of the agency's challenge is that it's feeling pressure from two sides. On the one hand, it needs to show results to justify continued funding. That's led it to fund some projects that have a higher chance of paying off, and to taking "fewer risks than they should have," says David Victor, director of the Laboratory on

International Law and Regulation at the University of California at San Diego. But playing it safe can also bring criticism from Congress. The chief complaint from a 2012 House hearing on ARPA-E was that it was funding some projects that could have been funded by companies instead of the government.

FERC Approves WECC Split

[Energy Prospects West, Feb. 18] The Federal Energy Regulatory Commission issued its final order Feb. 12 approving bifurcation of the Western Electricity Coordinating Council into two independent companies. The split is designed to provide greater reliability and more objective oversight of the Western Interconnection, according to WECC's announcement of the FERC final order. Since Jan. 1, Salt Lake City-based WECC and Vancouver, Wash.-based Peak Reliability have been operating independently. The FERC order will allow WECC and Peak to seat their boards of directors. Both WECC and Peak have core missions to promote the reliability of the Bulk Electric System and to serve public interest in the West, according to a press release announcing the FERC order. Both also have strong Member Advisory Committees that will provide advice on technical, operating and policy matters to their boards -- both of which are independent, not stakeholder boards -- according to WECC. WECC has continued its focus on monitoring and enforcing compliance with mandatory reliability standards -- as described in its Delegation Agreement with NERC -- as well as overseeing reliability planning and performance assessments of the grid.

For the Supreme Court, a Case Poses a Puzzle on the E.P.A.'s Authority

[New York Times, Feb. 24] WASHINGTON — In trying to decide whether the Environmental Protection Agency has the authority under two programs to regulate greenhouse gas emissions from stationary sources like power plants, the Supreme Court on Monday faced what Justice Elena Kagan called "the conundrum here." One part of the Clean Air Act, she said, seemed to require that such emissions be regulated. But another part set the emission thresholds so low that even schools and small businesses would be covered. The agency's solution was to raise those thresholds, and the resulting standards covered far fewer sources. That move was at the center of Monday's arguments, and the justices seemed divided along ideological lines over whether it was a sensible accommodation or an impermissible exercise of executive authority. Justice Anthony M. Kennedy, who may hold the decisive vote, made a point that did not bode well for the agency. "I couldn't find a single precedent that strongly supports your position," he told the agency's lawyer, Donald B. Verrilli Jr., the United States solicitor general. Mr. Verrilli said the solution to the conundrum was to allow the agency to exercise some discretion. "The choice," he said, "is between throwing up your hands with respect to what E.P.A. considers to be the most serious air pollution problem we have, or trying to deal with the implementation problem."

Obama Orders Higher Fuel Efficiency Standards for Big Trucks

[Environment News Service, Feb. 18] Upper Marlboro, MD – President Barack Obama today set the wheels in motion for the next phase of vehicle fuel efficiency and greenhouse gas standards for medium-duty and heavy-duty trucks as he pledged to do in his State of the Union address in January. Speaking at a Safeway distribution center in Upper Marlboro, the President directed the U.S. Environmental Protection Agency and the National Highway Traffic Safety Administration to develop and issue the next phase of standards by March 2016. The agencies are expected to issue a Notice of Proposed Rulemaking by March 2015. This second round of fuel efficiency standards will build on the first-ever standards for medium-duty and heavy-duty vehicles, covering model years 2014 through 2018. Proposed by the Obama Administration and finalized in September 2011, these standards took effect on January 1. They are estimated to save vehicle owners and operators a total of $50 billion in fuel costs and save a projected 530 million barrels of oil. Today the President also renewed his call for Congress to end federal government subsidies to oil and gas companies and create an Energy Security Trust Fund to fund research and development for advanced vehicle technologies. Obama is proposing to support investment in advanced vehicles and infrastructure through a new

tax credit and an extension of tax credits to support cellulosic biofuels, liquid fuels refined from agricultural waste and other biomass. To develop standards that provide long-term certainty and promote innovation, EPA and NHTSA will work closely with stakeholders, both large and small, to explore further opportunities for fuel consumption and emissions reductions beyond the model year 2018.

Oklahoma Launches '20%x2020' Energy Savings Program

[NASEO website, Feb. 11] The State of Oklahoma has launched 20%x2020, a statewide energy savings program that seeks to reduce energy use in state agency buildings by 20 percent by 2020. 20%x2020 is the first program of its scope in any state government. It was conceived by Gov. Mary Fallin, who signed legislation in 2012 creating the initiative, and the Legislature as a way to lower government utility costs in order to reduce overall state spending and free up resources for core government services. “State government has a lot of room to be more responsible with its energy usage,” Fallin said. “Every dollar saved on energy costs is a dollar better used back in the hands of taxpayers or by core government services. We believe this is the most ambitious behavior-based energy savings program any state government has undertaken, and we are committed to its success.” State agencies will participate in 20%x2020, which is part of Fallin’s Oklahoma First Energy Plan and will be administered by the Office of Management and Enterprise Services (OMES). The program has a dedicated website, 20x2020.ok.gov, that beginning later this year will allow agencies and the public to track monthly agency utility spending throughout the entirety of the initiative.

President Obama Signs Farm Bill

[NASEO website, Feb. 11] President Obama recently signed the bipartisan Farm Bill, saying it will provide more money for research into the environment and energy. Comparing the massive new law to a "Swiss Army Knife," Obama told supporters at Michigan State University that the farm bill "multitasks. It's creating more good jobs, gives more Americans a shot at opportunity." Obama also compared the bill to baseball star Mike Trout, saying both can do a little bit of everything. The five-year bill -- approved by Congress this week after years of fierce debate -- expands federal crop insurance. It also changes the food stamp program, cutting it by $800 million per year -- about 1% -- and raising the automatic eligibility requirement. The new law "helps rural communities grow" and "gives farmers some certainty," while also helping "make sure America's children don't go hungry," Obama said. The new bill also eliminates billions in subsidies to farmers, to be replaced by an insurance program.

WESTERN POWER

Colorado First State to Clamp Down on Fracking Methane Pollution

[Bloomberg, Feb. 23] Colorado regulators approved groundbreaking controls on emissions from oil and natural gas operations after an unusual coalition of energy companies and environmentalists agreed on measures to counter worsening smog. Anadarko Petroleum Corp. (APC), Noble Energy Inc. (NBL) and Encana Corp. (ECA), among the state’s largest oil and gas producers, worked with the Environmental Defense Fund to craft regulations approved yesterday by the Colorado Air Quality Control Commission that would fix persistent leaks from tanks and pipes.

Construction on Tres Amigas Power Superstation Pushed Back

[Clovis News Journal, Feb. 2] NEW MEXICO – The anticipated groundbreaking for a proposed power superstation northeast of Clovis has been delayed again, but Tres Amigas officials say the project is still moving ahead. Financing for the $550 million "power highway" that would allow electricity to move from coast to coast remains the primary holdup, Chief Operating Officer David Stidham said on Friday. "It is no longer a question on if it will be financed but when," Stidham said. "That process just takes time. We're talking half a billion dollars. Once you get to a certain place, you just can't imagine how much money that is." Stidham said officials have about 75 percent of the financing needed -- up from 50 percent in October -- and hope the rest can be in place in six to

eight weeks, which would allow construction to begin in June. Officials originally said they expected a July 2012 groundbreaking. Four months ago, they predicted building could begin by March of this year. "As soon as financing is complete, everything is in order to construct the project and transmission lines," Stidham said. "Everything will be placed on order and our contractor will probably be on-site within 90 days to begin getting the ground ready." Officials have said construction is expected to take place over eight years, in three phases. While about 100 permanent jobs have been awarded to Rio Rancho, Clovis would see 200 to 600 jobs during construction and up to a dozen permanent jobs when the facility is complete, officials have said. Wind farms and other energy projects would be expected to locate in the region to take advantage of Tres Amigas' resources. Tres Amigas would allow 4,750 megawatts of electricity -- enough to power 3.6 million homes -- to flow through all three of the nation's power grids.

Ivanpah Solar-Thermal Plant Opens As Industry Continues To Grow

[Associated Press, Feb. 13] Primm, NV – A windy stretch of the Mojave Desert once roamed by tortoises and coyotes has been transformed by hundreds of thousands of mirrors into the largest solar power plant of its type in the world, a milestone for a growing industry that is testing the balance between wilderness conservation and the pursuit of green energy across the American West. The Ivanpah Solar Electric Generating System, sprawling across roughly 5 square miles (13 sq. kilometers) of federal land near the California-Nevada border, formally opens Thursday after years of regulatory and legal tangles ranging from relocating protected tortoises to assessing the impact on Mojave milkweed and other plants. The $2.2 billion complex of three generating units, owned by NRG Energy Inc., Google Inc. and BrightSource Energy, can produce nearly 400 megawatts - enough power for 140,000 homes. It began making electricity last year. Larger projects are on the way, but for now, Ivanpah is being described as a marker for the United States' emerging solar industry. While solar power accounts for less than 1 percent of the nation's power output, thousands of projects from large, utility-scale plants to small production sites are under construction or being planned, particularly across the sun-drenched Southwest. The opening of Ivanpah is "a dawn of a new era in power generation in the United States," said Rhone Resch, president of the Solar Energy Industries Association, a trade group. "We are going to be a global leader in solar generation." The plant's dedication comes as government continues to push for development of greener, cleaner power.

Over $3.6 Billion in Transmission Improvements for Texas by 2018

[NASEO website, Feb. 11] A report recently released by the Electric Reliability Council of Texas (ERCOT) identifies several transmission improvements planned for the next five years to address growing needs on the electric grid that serves most of Texas. According to the 2013 Report on Existing and Potential Electric Constraints and Needs, transmission providers in the ERCOT region expect to complete more than $3.6 billion in projects between 2014 and 2018. These include additions or upgrades to more than 3,300 miles of transmission lines and other equipment improvements to increase capacity and support reliability. Improvements identified in the report focus on existing and potential constraints, where limited capacity of transmission infrastructure could create reliability concerns or increase power costs for consumers in the next five years.

Seattle Company To Build Pacific Coast's First Offshore Wind Farm

[Power Engineering, Feb. 18] Seattle's Principle Power has received approval from the U.S. Department of the Interior to seek a lease for 15 square miles of water off Coos Bay, Ore., to build the nation's first offshore wind farm in the Pacific Coast. The $200 million WindFloat project would be the first in the nation to use triangular floating platforms instead of single piles driven into the ocean floor, according to the Seattle Times. The platforms would float about a quarter mile deep and be spaced about a mile apart. The structures, from water surface to the tip of the turbine blade, would soar about 600 feet, the article said. The five 6-MW turbines would be connected to cable lines, which would be buried about 3 feet deep, to carry power. The line would be drilled deeper the closer it is to the shore to prevent interruptions caused by waves. The cable

will be hooked up to a substation and connected to the power grid. WindFloat is expected to be operational, producing 30-MW of power, by late 2017.

Two Solar Projects Approved on Public Lands in Calif. and Nev.
[Los Angeles Times, Feb. 19] Federal officials have announced the approval of two solar projects on public land in California and Nevada. The projects are expected to generate about 550 megawatts of renewable energy, or enough to power about 170,000 homes, the Interior Department said in a statement Wednesday. Interior Secretary Sally Jewell said the two projects are among 50 such utility-scale renewable proposals that have been approved by the department since 2009. The Stateline Solar Farm Project will be built in San Bernardino County about two miles south of the Nevada border. The facility will generate enough electricity to power about 90,000 homes. The second facility, called the Silver State South Solar Project, will be built near Primm, Nev. It will generate enough electricity for about 80,000 homes.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

- Angel Investment Tax Credit Program **-** The main objective of the Angel Investment program is to expand early stage investments in targeted Arizona small businesses. The program accomplishes this goal by providing tax credits to investors who make capital investment in small businesses certified by the Arizona Commerce Authority (ACA). To view the list of businesses that have been certified under this program please click here. LEARN MORE

- Arizona Innovation Accelerator Fund - The Arizona Innovation Accelerator Fund Program is an $18.2 million loan participation program funded through the U.S. Department of Treasury's SSBCI and managed by the Arizona Commerce Authority. The goal of this program is to stimulate financing to small businesses and manufacturers, in collaboration with private finance partners, to foster business expansion and job creation in Arizona. LEARN MORE

- Arizona Innovation Challenge - The Arizona Innovation Challenge is an investment in the minds of talented entrepreneurs in Arizona and around the world. The ACA will award $1.5 million to the most promising technology ventures that participate in the Challenge (awards may range from $100,000 to $250,000).
  LEARN MORE

- AZ Fast Grant - Enables Arizona-based technology companies to initiate the commercialization process. Total funds available for this grant round are $175,000. Maximum awards of $5,000 and $20,000 will enable companies to accomplish one of four scopes of work. LEARN MORE

- AZ Step Grant - Grant funding from the U.S. Small Business Administration (SBA) with matching funds contributed by the Arizona Commerce Authority (ACA) offering a number of services and tools to Arizona small businesses as they go global for the first time with sales or enter new, international markets.
  LEARN MORE

- Commercial/Industrial Solar Energy Tax Credit Program - The primary goal of the Commercial/Industrial Solar Energy Tax Credit Program is to stimulate the production and use of solar energy in commercial and industrial applications by subsidizing the initial cost of solar energy devices. The program achieves this goal by providing an Arizona income tax credit for the installation of solar energy devices in Arizona business facilities. LEARN MORE

- Healthy Forest - The primary goal of the Healthy Forest Enterprise Incentives Program is to promote forest health in Arizona. The program achieves this by

proving incentives for certified businesses that are primarily engaged in harvesting, processing or transporting of qualifying forest products. LEARN MORE

- Job Training Program offers job-specific reimbursable grants for employers creating new jobs or increasing the skill and wage level of their current employees. Deadline: Year Round. LEARN MORE

- Renewable Energy Tax Incentive Program offers a refundable income tax credit and property tax reduction to companies in solar, wind, geothermal and other renewable energy industries who are expanding or locating a manufacturing or headquarters operation in Arizona. The tax credit is up to 10% of the total qualified investment amount and the property tax benefit can reduce a company's property taxes by up to 75%. Deadline: Year Round. LEARN MORE

- Research and Development Tax Credit is an Arizona income tax credit for increased research and development activities conducted in this state. Starting in 2010, a qualifying company may be eligible to claim a partial refund of its current year excess R&D credit. Applicants may apply at the end of their tax year but prior to filing a tax return with Revenue. LEARN MORE

Quality Jobs Tax Credit Program - The primary goal of the Quality Jobs Tax Credit program is to encourage business investment and the creation of high-quality employment opportunities in the state. The program accomplishes this goal by providing tax credits to employers creating a minimum number of net new quality jobs and making a minimum capital investment in Arizona. LEARN MORE

- **Bonds Administered by the Arizona Commerce Authority**
  - Private Activity Bonds (PAB) - Tax exempt bond financing, for federal purposes, offers an alternative financing mechanism for certain projects. LEARN MORE
  - Qualified Energy Conservation Bonds (QECB) - Tax credit bonds are available as an alternative financing mechanism for certain green projects. LEARN MORE

- **Federal Programs**
  - **Small Business Innovation Research (SBIR) Program -** SBIR is a competitive program that encourages small businesses to explore their technological potential, as well as, providing incentive to profit from its commercialization. LEARN MORE
  - **Small Business Technology Transfer (STTR) Program** - STTR is an important small business program that expands funding opportunities to meet the nation's scientific and technological challenges in the 21st century. LEARN MORE
  - **Work Opportunity** - The Work Opportunity Tax Credit (WOTC) is a federal tax credit of up to $9,000 that Congress provides to private-sector businesses for hiring individuals from nine target groups who have consistently faced significant barriers to employment. LEARN MORE

- Pollution Control Tax Credit - Provides a 10 percent income tax credit on the purchase price of real or personal property used to control or prevent pollution.

- Renewable Energy Production Tax Credit - An income tax credit awarded to utility-scale generation systems based on the amount of electricity produced annually for a 10-year period using solar or wind energy. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

- **Sales Tax Exemption for Machinery and Equipment**
  Exemptions are available for:

  1. Machinery or equipment used directly in manufacturing, see ARS 42-5159(B)(1).
  2. Machinery, equipment or transmission lines used directly in producing or transmitting electrical power, but not including distribution, see ARS 42-5159(B)(4).
  3. Machinery or equipment used in research and development, see ARS 42-5159(B) (14).

Questions can be directed to Christie Comanita (602-716-6791).

- Solar Liquid Fuel Tax Credit - Income tax credits are available for research and development, production and delivery system costs associated with solar liquid fuel. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

- Database of State Incentives for Renewables and Efficiency (DSIRE)
  - Arizona Incentives/Policies
  - Federal Incentives/Policies
  - Solar Policy News - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- Vehicle Technologies Incubator - Close Date: February 28, 2014
- Next Generation Photovoltaic Technologies 3 - Close Date: March 3, 2014
- Sunshot Incubator Program Round 9 - Close Date: March 13, 2014
- National Incubator Initiative for Clean Energy (NIICE) - Close Date: March 21, 2014
- Next Generation Photovoltaic Technologies III - Close Date: March 24, 2014
- NEW! FY 2014 Vehicle Technologies Program Wide Funding Opportunity Announcement - Close Date: April 1, 2014
- NEW! Renewable Carbon Fibers - Submission Deadline for Concept Papers: 03/03/2014 at 5:00 P.M. Eastern Standard Time. Submission Deadline for Full Applications: 04/11/2014 at 5:00 P.M. Eastern Standard Time
- NEW! Geothermal Play Fairway Analysis - Close Date: April 11, 2014
- NEW! U.S. Wind Manufacturing: Taller Hub Heights to Access Higher Wind Resources and Lower Cost of Energy - Close Date April 14, 2014
- NEW! Building Energy Efficiency Frontiers and Incubator Technologies (BENEFIT) - 2014 - Close Date April 21, 2014

- NEW! Integrated Enhanced Geothermal Systems (EGS) Research and Development - Close Date April 30, 2014
- NEW! Low Temperature Geothermal Mineral Recovery Program - Close Date May 2, 2014
- Advanced Fossil Energy Projects - Solicitation Number: DE-SOL-0006303 - Expiration Date 11/30/2016
- Sunshot "Race to the Roof" Initiative - Registration Due October 31,2014
- Repowering Assistance Program - Ongoing
- Rural Business Enterprise Grants - Ongoing
- Rural Business Opportunity Grants - Ongoing
- Sustainable Agriculture Research and Education Grants - Ongoing
- Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines
- U.S. Dept. of Agriculture - Rural Development Grant Assistance

ENERGY-RELATED EVENTS

2014

- Sustaining the Reservation: Creating Tribal Economies
  February 27-28, 2014 Tempe, AZ
- Solar PV Trade Mission Mexico
  March 3-7, 2014 Mexico City, MEXICO
- NARUC – Current Issues
  March 9-12, 2013 Santa Fe, NM
- Solar O&M North America
  March 25-26, 2014 San Francisco, CA
- Clean Tech Future Conference III
  April 9, 2014 Phoenix, AZ
- International Geothermal Energy Forum
  April 23-24, 2014 Washington, DC
- 11th Annual Construction in Indian Country Nat'l., Conference
  April 28-30, 2014 Chandler, AZ
- VerdeXchange Arizona
  April 30-May 2, 2014 Phoenix, AZ
- AWEA Windpower 2014
  May 5-8, 2014 Las Vegas, NV
- Beyond the Border: Arizona Trade Mission to Mexico City & Guadalajara
  May 12-16, 2014
- Sunshot Grand Challenge Summit 2014
  May 19-22, 2014 Anaheim, CA

- Native American Economic Development & Energy Projects Conference
  June 16-17, 2014 Anaheim, CA
- 32nd Annual West Coast Energy Management Congress
  June 25-26, 2014 Seattle, WA
- National Geothermal Summit
  August 5-6, 2014 Reno, NV
- Geothermal Energy Expo
  September 28-October 1, 2014 Portland, OR
- ASU Sustainability Series Events
- Green Building Lecture Series
  Granite Reef Senior Center Scottsdale, AZ